CrossMark

ORIGINAL RESEARCH

Restaurant revenue management: apply reservation management?

Bill J. Gregorash[1,2]

Abstract Restaurateurs obviously want to turn their tables as empty seats equates to zero revenue, so to achieve the best *revenue per available seat hour* (RevPASH) they can work hard by scrambling at the door trying to orchestrate people into chairs or should they work smart and let the technology sort out the crowds…or a combination. The latest fad in trendy restaurants is to not take reservations. Many restaurant operators are confident and feel that their product is so good that customer's will walk-in and wait for a table. The wait may be at the bar, in the lobby, on the sidewalk or even at another restaurant or bar across the street, but they will wait for a table in "*the* place to dine". It seems that some restaurateurs of these trendy places cannot be bothered with the services of mobile apps like Open Table who take all the work away from restaurants by allowing customers to "book a table" in three clicks. The issue with these reservation apps is the cost to the restaurateur which is around $1.25 CDN per guest plus a one-time start-up cost for hardware and access. Every reservation system relies on staff to answer telephones and emails and/or manage software to then coordinate the process to 'reserve' the actual physical space. Reservation systems can work effectively if the reservation staff work error-free and the customers honor the booking by showing up at the time they requested (or booked), but in reality this is never the case. Restaurant staffs make errors and customers don't show up. Major complaints from customers arise from errors in booking (phone/email) where the table isn't available at the time (or even booked) and restaurant management complain (lost revenue)when guests are 'no-shows'. To curtail the 'no-shows', some restaurant's demand a credit card number with a booking and threaten a cancellation fee charge to those who don't cancel in time. With this being said a restaurant can get a bad review by customers

✉ Bill J. Gregorash
bill.gregorash@confederationc.on.ca

1 University of Leicester, University Road, Leicester LE1 7RH, UK

2 Confederation College, 1450 Nakina Drive, Thunder Bay, ON P7C 4W1, Canada

Springer

from the way a reservation is handled before they even taste the food. So the question this research paper attempts to answer is simple; in fine dining (trendy) environments, do customers who have pre-booked reservations spend more than the customers who "walk-in"? Data was collected by observing the 'average guest check' spending on revenue statistics on tables of two, three and four at five fine dining restaurants over the course of a 3 week period. The findings show that the mean guest check for guests with reservations was overall higher in all five restaurants with three of the five statistically significant using an independent t test as verification. This finding perhaps demonstrates that restaurant customers who make reservations are more valuable and restaurants that don't take reservations may need to re-think their policy as this may affect revenue. More research is needed in other major centers to verify this trend in restaurant spending along with a study of the restaurants that do not take reservations. The findings of this research will enable restaurateurs to develop a reservation system that takes advantage of their seating plan to maximize the revenue per chair based on whichever reservation policy they feel comfortable with.

1 Introduction

It was only a matter of time before someone found a way to make money in the restaurant business without actually owning one or working in one, another disruptive technology changing the way we live. OpenTable (opentable.com) is to the restaurant industry what Uber is to the taxi business. Both are involved, but neither are committed to assets, Uber owns no taxis, and OpenTable owns no restaurants. OpenTable is one example of a technology we can use to enhance our pursuit of gastronomic experiences. For example, let's say you have forgotten your loved one's birthday and now you are in a panic to make amends by going out for dinner, but it is 4 pm on a Saturday…what are the odds on getting a table reservation this late? You have two options. First, log into Killer Rezzy (killerrezzy.com) and select an available reservation time at the hottest restaurants in town… (only catch here is you will have to pay a fee to Killer Rezzy $10–25 to get that table) or second, you can head out to a different group of hot restaurants that do not take reservations and take your chance standing in line with the hordes. The act of travelling to a restaurant to find there is a 2 h wait for a table is a risk not many people are willing to take. In this situation one must put a price on the value of the relationship; at this point perhaps the $20 on Killer Rezzy is well spent to keep the peace. What about the restaurants in these situations, what is best for them? Taking reservations is not as cumbersome as it used to be with the help of technology and apps like OpenTable where you can book a table reservation in only three clicks on your smart phone. So why are some restaurants holding fast with no-reservation policies and others maintain the status quo? The simple reason comes down to money; obviously both camps feel that they are maximizing revenue with their adopted

reservation policy. Restaurants are in the business to make money and are doing what is in the best interest to them in achieving their goals, regardless of the consumer's perception.

This study looks at the money side of reservations, the money spent on average by restaurant patrons. Specifically, this research paper looks at the spending patterns of restaurant customers who have made reservations in advance and those who 'walk-in' taking the chance to get a table. There is no way to compare the spending between restaurants that take reservations and those that don't because each establishment has unique pricing plus numerous other effecting factors like staff (up-selling or not), atmosphere and type of cuisine. What an individual customer may spend in 'Restaurant A' and 'Restaurant B' is determined by factors too numerous for any agreed comparison analysis. What this study does is to look at restaurants that take both reservations and walk-ins and compare the spending using Average Guest Check as the measurement tool (the table sales divided by the number of guests at the table equals the average spent per guest). Another measurement calculation is done by using RevPASH (Revenue Per Available Seat Hour). By dividing revenue for a given period by the available seat hours in that same period allows management to evaluate dining room performance. Note: RevPASH is not used in this study only the average (mean) guest check, RevPash looks at the total volume of sales at specific times from all sources (walk-ins and reservations). An increase in average guest checks would contribute to a positive RevPash as long as the volume remained constant or increased.

Comparing the two types of restaurant patrons was the strategy; the first is the person who planned ahead by booking a table, perhaps for a special occasion, business dinner or just because it's Saturday. The second person in this study is the one who has decided last minute that they would take a chance in getting in at a restaurant without a reservation. Determining which of the two groups of patrons are spending more per person (average guest check) was the objective. The speculative theory was that those who planned ahead are the ones prepared to 'drop some money' on the experience, over the last minute drop-ins. With this knowledge a restaurant owner can decide on which reservation policy suits them best with regard to revenue management, as both options require commitment in resources. Those restaurants that wish to take reservations have to either invest in technology (i.e. reservation software) or telephone systems to manage customer requests; the restaurants that don't take reservations need only pen and paper for wait lists…perhaps a PA (microphone) to call tables when ready.

A recent interesting personal observation was at a popular rather new restaurant that did not take reservations. It had empty tables at prime time (7–8 pm) on a Saturday night which made me wonder if people couldn't be bothered to take a chance and show up for a table because they didn't want the hassle of waiting. It was after all the weekend after Valentine's Day and very cold (-14 °C). Perhaps those who went out for dinner preferred the comfort of having a reservation (for convenience) at a restaurant of similar cuisine over one they knew they might not have gotten a table.

2 Literature review

2.1 Best practices

At some point during the inception process of creating a restaurant concept a decision has to be made on whether or not reservations will be accepted. Getting a customer in the seat at the table is part of how a restaurant is evaluated during the overall experience. In a perfect world customers would arrive as the restaurant operator is ready to service them food and drink, but it is not a perfect world…almost everyone wants that cozy table in the back at 8 pm on Saturday night…so who gets it? The person who booked a month in advance? Or the person who just walked in the restaurant…tough decision if the person who booked is late…a no-show? A restaurant operator must make this decision and live with the potential fall-out, loss of revenue or loss of customer…reservation policies can affect the brand of the restaurant.

The Culinary Institute of America (2014) also known as the CIA provides a comprehensive guide for reservation practices in their book "Remarkable Service" that begins with a self-evaluation of the restaurant, beginning with the 'style of restaurant'…formal or casual. The number of seats and projected covers (guests) is a determent factor as a restaurant with a high volume of tables that turn over quickly may not need a reservation policy and the same for a 'popular' place that is high in demand (p. 113).

The Culinary Institute of America (CIA) (2014) presents advantages and disadvantages of accepting reservations, where the advantages far outweigh the disadvantages by two to one (6–3 in list). They also present the advantages and disadvantages of a no-reservation policy where the advantages have a slight edge (7–6 in list) (p. 115). In the CIA lists there is no specific mention of a revenue advantage or disadvantage in either policy. We can assume all the policy best practices listed are designed to maximize revenue by utilizing the seats available efficiently. Neither of the lists identifies the spending characteristics of the customers and a strategy to cater to the ones of most value. This research may begin to understand customer behaviour through their motivation, how they plan to dine out and perhaps an addition can be made to both lists that customers with reservations and those who walk-in have a determined value.

2.2 Reservation policy and systems

All restaurants have to invest in staff training regardless of the reservation system chosen because it is a component of the customer dining experience that consists of six main segments. The first is the "pre-arrival": from when customers decide they want to come to the restaurant until they arrive at the restaurant (Kimes 2008:299). This first step in the decision process is important because understanding the motivation behind why the consumer is dining away from home would indicate the potential for spending. There are only two reasons people dine outside their home, they want to or they have to. An argument could be made for both groups of diners

as to who is spending more, but is not important, as this study involved restaurants classified on the higher end of the fine dining scale. Fine dining itself has been reinvented in Canada as most of the popular hot spots no longer resemble traditional fine dining from 20 years ago; the crisp tablecloths, silver and lush soft atmosphere has given way to butcher block wood for tables and hard flooring. The top trendy restaurants today have an 'industrial revolution' factory atmosphere, exposed brick, Edison lights, cement bars and exposed kitchens with staff in t-shirts and jeans and think nothing of charging fine dining pricing. The Black Hoof restaurant (Toronto, ON) is adamant in their policy "cash and Canadian debit, no reservations" (retrieved from: http://theblackhoof.com Accessed February 15, 2016), a policy that favours the restaurant over the consumer. It is well researched that long waiting times in restaurants is a source for major customer dissatisfaction (Hwang 2008:335) yet the trend to adopt the Black Hoof Restaurant model is seemingly successful in spite of research findings. Prewitt (2007) states 55.5 % of respondents in a Cornell University Centre for Hospitality Research study said they would always pick a restaurant that takes reservations for business dining and only 2.6 % reported they'd select a restaurant with a first come first serve wait list. With this being said are these restaurants losing out on revenue, based on the assumption that those who book in advance spend more, because they are focused on creating an experience that doesn't include waiting for a table? On the other side, restaurateurs argue that having customers waiting for a table (and having cocktails) is part of the experience, the social foreplay before the formal sit-down-to-eat. Restaurants can sell a few pre-dinner high-priced, 'hand-crafted' cocktails to guests at the bar waiting for their table, another form of upselling in modern restaurants today. A growing trend is for restaurants to offer 'bespoke' premium cocktails (with premium prices) like the margarita topped with a habanero "salt air" foam (Thorn 2015) as a differentiating factor in creating unique customer experiences.

Reservations in restaurants have been the subject of many research studies, Thompson and Kwortnik (2008) argued that if restaurants 'pooled' their tables as opposed to 'locking' them to incoming reservations, it would increase service efficiency that allows quicker table turns and therefore more revenue. The pooling technique is more complex than locking which explains why only 20 % of the restaurants in the study adopted the pooling policy, a helpful fact presented was that there is reservation handling technology available in commercial restaurant reservation systems i.e. OpenTable (Thompson and Kwortnik 2008:337). Using technology to support reservation policy is widely available but at a cost. For example, diners who make reservations through OpenTable.com do not pay a fee, but there is an installation fee for restaurants of $1200 and a monthly service fee of $200 for hardware, software training, maintenance, and call support. In addition, there is a $1 fee for each reservation per person that comes through the OpenTable website (Weinstein 2008:106). The cost to a restaurant using technology like OpenTable needs to be justified as a necessary operating expense that replaces the human element of manually taking reservations. On the consumer side, technology like the OpenTable app allows patrons to set-up a personal profile in advance and use location service on their smart phones to find nearby restaurants with available seating. Thus eliminating the need of the cumbersome phone call or

timely email process. OpenTable, which is available in most major cities worldwide (32,000 restaurants) started in 2008 book 47 % of reservations in North America are made with the OpenTable app (retrieved from http://www.opentable.com March 17, 2016).

In defence of the restaurants that don't take reservations, there is research on best practices that maximize revenue by using table management as a tool to reduce waiting time, improve seat turnover and increase customer satisfaction. A study by Hwang (2008) determined the best seating policy by using a restaurant simulation model that demonstrated the distribution rate (party size and arrival) with spatial priority concerns. Simply put, rather than seating guests in a "Random" pattern at tables, they found that seating guests physically "Front-to-back" and "Out-in" arrangements resulted in better performance, which translates to increased seat turn-over and ultimately higher revenue (p. 349). The study by Hwang (2008) made no mention of reservations, so one could assume this study was favouring large box chain restaurants like the Olive Garden that does not take reservations which would potentially benefit from this research. I would project that adopting this seating practice to restaurants that do take reservations *and* walk-ins would benefit as well, a strategy perhaps overlooked by reservation restaurants.

Table location is one component of the restaurant physical environment that influences customers' dining experiences (Hwang and Yoon 2009). This study argues that restaurant operators need to make an effort to reduce the variance between where a customer sits and where a customer wants to sit (p. 231). I don't think we need to conduct customer spending research on whether or not a customer 'likes' the table they are sitting at, anyone sitting at a table in restaurant where they feel uncomfortable will obviously not spend what they would at a more comfortable table. The issue that surfaced from the Hwang and Yoon (2009) study was that restaurant consumers place a high value on privacy and where they sit with regard to table location and are often willing to pay extra for better table locations. The ritual of 'greasing the palm' of the Maître d' in a restaurant is an accepted practice (and un-ethical in some eyes) to get a table near the stage in a Las Vegas dinner theatre, and also a practice to jump-the-queue in restaurants. With this being said can we then assume restaurant experiences are a product with hierarchal levels, the same as purchasing a handbag? If a restaurant creates a unique environment and as a result there becomes a demand for specific seating, for example if the table has a view or added privacy like a booth, it becomes a desired commodity that people will pay extra for. The problem here is the restaurant does not make any 'extra' money from the willingness to pay more for the prime tables, the staff does, those who control the seating arrangements.

Respondents who were more familiar with a restaurant reservation policy were significantly more acceptable, more understandable and fairer than those who were not as familiar (Kimes 2011:257). Kimes study (2011) presents the five popular reservation policies like: (1) *Credit Card Guarantee*, where customers submit a credit card number with their reservation knowing that if they do not show up at the restaurant a charge (set deposit) will be incurred. This policy while reducing the number of no-shows in reservations, requires management to assess the risks the impact may have on customer satisfaction when deposits are kept. (2) *Short-Shows*,

or 'right number in the party' policy are somewhat similar where if the number of guests who show up are less than the number booked in the reservation, the restaurant can levy a charge. This policy although it makes sense from the management perspective, to make up for lost revenue, the customers who do show face the affect and feel that they have no control with the guests who didn't show. (3) *Table Holding*, this policy is about the length of time a restaurant 'holds the table', when the guests are late the restaurant gives the table away to the next available guests waiting in the queue. The length of time that a restaurant holds the table for a reservation is normally anywhere from 10 to 20 min, a policy that is widely viewed by patrons as understandable and acceptable. (4) *Entire Party Seating* policy was viewed as neutral by respondents most thought it was understandable, this policy is where the restaurant refuses to seat guests at a table until all have arrived. From the restaurant perspective I can understand not committing tables to a party that may not have the number of guests requested in the initial reservation. When it is all about maximizing revenue, restaurant operators get cranky when only three people have been sitting at a table of eight for 40 min while there is a waiting list to get in. Some customers see this policy differently as they feel that the restaurant will generate more revenue if the partial party is seated and begin ordering drinks and appetizers. (5) The *Maximum Duration* policy was unfamiliar with respondents of the study and viewed it as unacceptable and commented "this policy is inhospitable". Putting time limits on dining experiences received many comments that ranged from those who felt entitled to "stay at my table for as long as I want" to those who understood the reasoning that "a restaurant is in business and needs to be able to turn tables to make money". As a restaurant operator, I felt that a table could sit for as long as they want if they were 'spending', again operators get anxious when tables stop spending and people are at the door waiting. If a time is imposed as part of the reservation process it needs to be generous and reasonable (Kimes 2011:254).

Reservation policies are not the focus in the findings of this paper but what is of apparent interest for future study is why the 39.5 % of the customers in this research ignored all of the policies of the restaurants and decided to 'walk-in'. Kimes (2011:259) concludes that reservations are in place to give restaurant operators the opportunity to "select the more profitable mix of customers" which is the focus of this study, revenue management.

A working paper study by Alexandrov and Lariviere (2012) argues the operational benefits of restaurant reservations, specifically the ways in which reservations can increase a firm's sales by altering customer behaviour through customer demand. What is relevant from the Alexandrov and Lariviere (2012) study is they identified segmentation of customers as one of the tools to increased spending, they state:

> "Tweaking the sales mix would be worthwhile if the segments differ in both their costs and spending proclivities. If high cost customers are more likely to run up large tabs, reservations would be warranted if the gain in the average bill is sufficient to compensate for the resulting no shows" (p. 25).

With this being said the task of coordinating reservations based on customer spending would be made simpler if we could identify them in advance of their arrival at the restaurant.

Finally, "tickets", needs to be mentioned, a novel way of booking a table in a restaurant. Instead of booking a table by providing the usual name and phone number, a customer needs to pay for the whole the meal which is usually a set price (food and sometimes wine), basically they buy a 'ticket' for the restaurant. This system manages the risk of reservation no-shows with cash up front putting the onus on the guests. Currently in the United States technology is being developed in the form of Apps to assist access to restaurants for potential patrons to use on smart phones (http://www. theglobeandmail.com/life/food-and-wine/food-trends/restaurants-turning-to-pre-paid-meal-reservation-system/article24753657/, retrieved June 20, 2016). There are no academic studies that investigate consumer acceptance to restaurant 'tickets' at the time of writing.

3 Methodology

The primary objective in this study is to investigate if there are differences in spending (revenue) between restaurant guests who make reservations and those who 'walk-in'. Therefore the null hypothesis is stated as:

> H_o *Restaurant guests who make reservations spend equally per average guest check with restaurant guests who show up as walk-ins*

Five restaurants agreed to participate in the research study, each one is independently owned and operated in the city of Thunder Bay, ON, Canada, and all have a seating capacity between 75–100 people. The restaurants are rated within the top 30 restaurants in Thunder Bay on TripAdvisor (https://www.tripadvisor.ca/Restaurants-g155017-Thunder_Bay_Ontario.html#MAINWRAP, Retrieved on February 16, 2016) all offer table service and accept reservations and walk-ins. Confidentiality of sales was a concern of the restaurant operators, to mitigate this issue the data was de-identified by using a code rather than the restaurant name in the analysis. Each of the restaurants had dedicated a staff member to record the sales data for a 3 week period Tuesday to Saturday between the times of 5 pm and 8:30 pm as this is the peak dinner hours for the general population of diners in Thunder Bay. The study started on February 16, 2016 to avoid Valentine's Day (February 14) which is traditionally one of the busiest days in the restaurant world, also February 15 was a bank holiday in Canada (Family Day). The period from February 16 to March 5 is traditionally a 'flat' sales time of year as it is still winter (max −5 °C, min −16 °C temperature) and there are no major city events, school breaks or holidays. Many Canadians travel south for sun holidays at this time period with the majority travelling mid-March (March Break). The restaurants will record only the sales from tables for 2, 3 and 4 from those with reservations and walk-ins during the dedicated time because customers arriving later than 8:30 traditionally tend to 'graze' on appetizers and 'small plates' and don't order full meals. Large table sales of 5+ were not included in the study because mainly they would have

been booked as a reservation, few if any large parties of 5+ show up to restaurants that take reservations without one. In addition larger parties may have set menus and unique pricing which would then skew the data collection; the goal was to keep the sample size consistent. The restaurants collected the table sales and guest count for up to eleven tables per day for each group, those with reservations and the walk-ins using a manual spread sheet. The raw data entered into an excel spread sheet to calculate the average (mean) guest check (table sales divided by number of guests) for entry into SPSS to run an independent t-test for each restaurant separately. Although each restaurant was similar, and could be classified as 'up-scale' or 'fine dining' it was felt to run the analysis independently due to the variance among the restaurants in their menu pricing of food and beverage (two of the restaurants are noted for their extensive wine lists, one is a Wine Spectator Magazine Award Winner). The sales data per day was separated for future analysis with the assumption spending patterns may vary between the days of the week. The data was collected only on the days Tuesday to Saturday even though two of the restaurants operate 7 days a week (three operate Tuesday–Saturday).

4 The results

Table 1 presents the data collected from the five restaurants, the number of walk-in guests, the number of reservation guests and the mean in dollars (average guest check) from each. Notice that walk-in customers represented 39.5 % of the total customers in this study, 60.5 % were customers with reservations. It is important to note that only one entry per table was used in the calculations which accounts for the difference in guests in table one and the group statistics for each restaurant. In total there were 1,408 guests recorded by the restaurants at tables of 2, 3 and 4 but only one entry of the average guest check was used (i.e. a guest check for a table of 3 that totaled $135.00, only the average of $45 was recorded in the calculations as one entry and not three). The study had 1408 guests that translated to 491 average guest check entries (N = 491).

Figure 1 graph compares the average guest check (mean) of the walk-in guests and those with reservations. Interesting to note that all the restaurants average guest check means for the reservations customers was higher across the board. Restaurants #2, #3, and #4 were the only ones determined with statistical differences that favored those customers with reservations. Two of the restaurant operators had speculated that this was the case prior to this study and were very interested in the results along with the other restaurant operators.

The data from each restaurant was entered into SPSS where a non-parametric test on the means for all the restaurants was performed, as a result, the rejection of the null hypothesis for restaurants #2, #3, and #4 was supported. Further investigation using an independent T Test confirmed the finding and report here:

Table 1 Restaurant guest count and mean check totals

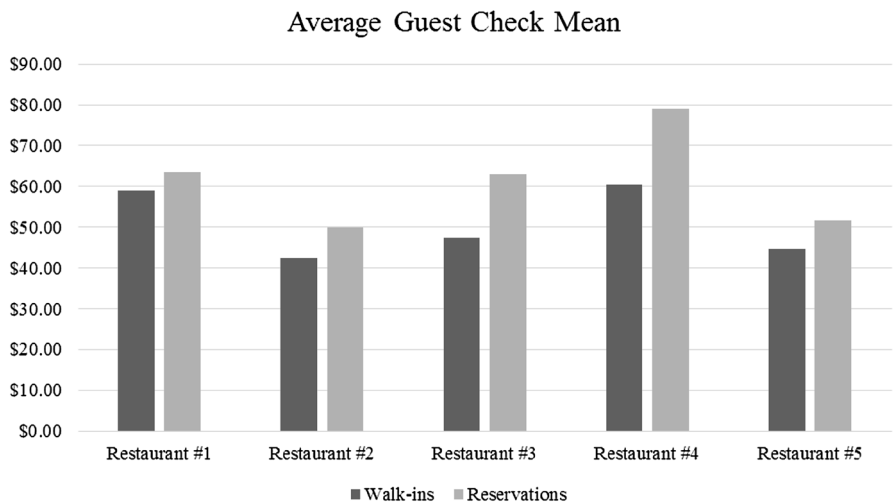|	Restaurant 1	Restaurant 2	Restaurant 3	Restaurant 4	Restaurant 5
Walk-in guests	157	152	169	43	35
Check mean in dollars	58.98	42.35	47.48	60.44	44.63
Reservation guests	172	113	167	266	134
Check mean in dollars	63.58	49.85	63.04	79.09	51.66
Variance	4.60	7.50*	15.56*	18.65*	7.03

* Denotes statistical significance

Fig. 1 Walk-in versus reservation guest check average (mean) (*asterisk* denotes statistical significance)

4.1 Restaurant #1

Hypothesis test summary

Null hypothesis	Test	Sig.	Decision
The distribution of the Average Guest Check Restaurant #1	Independent-samples Mann–Whitney U test	0.228	Cannot reject null hypothesis

Asymptotic significances are displayed. The significance level is 0.05

Group statistics

	Customer	N	Mean	Std. deviation	Std. error mean
Average Guest Check Restaurant #1	Walk-in customer	67	$58.9842	$16.78040	$2.05005
	Reservation customer	63	$63.5837	$16.55109	$2.08524

Independent samples test

Average Guest Check Restaurant #1	Lavene's test for equality of variances		t	t test for equality of means					
	F	Sig.		df	Sig. (2-tailed)	Mean difference	Std. error difference	95 % confidence interval of the difference	
								Lower	Upper
Equal variances assumed	0.302	0.584	−1.572	128	0.118	−$4.59947	−$2.92545	−$10.388	$1.18903
Equal variances not assumed			−1.573	127.702	0.118	−$4.59947	$2.92420	−$10.386	$1.18669

There was homogeneity of variances for the average guest check amounts for walk-in customers and reservation customers, as assessed by Levene's test for equality of variances ($p = 0.118$)

4.2 Restaurant #2

Hypothesis test summary

Null hypothesis	Test	Sig.	Decision
The distribution of the Average Guest Check Restaurant #2	Independent-samples Mann–Whitney U test	0.008	Reject the null hypothesis

Asymptotic significances are displayed. The significance level is 0.05

Group statistics

	Customer	N	Mean	Std. deviation	Std. error mean
Average Guest Check Restaurant #2	Walk-in customer	60	$42.3515	$17.02809	$2.19832
	Reservation customer	42	$49.8543	$15.23534	$2.35086

Independent samples test

Average Guest Check Restaurant #2	Lavene's test for equality of variances		t	t test for equality of means					
	F	Sig.		df	Sig. (2-tailed)	Mean difference	Std. error difference	95 % confidence interval of the difference	
								Lower	Upper
Equal variances assumed	0.345	0.553	−2.286	100	0.024	−$7.50279	−$3.28275	−$14.016	$0.98991
Equal variances not assumed			−2.331	94.069	0.022	−$7.50279	$3.21856	−$13.894	$1.11231

There was a statistically significant difference in mean average guest check amounts between walk-in customers and customers with reservations, $-\$7.51 \pm \$3.22$ [mean ± standard error], $t(-2.331)$ $p = 0.022$

4.3 Restaurant #3

Hypothesis test summary

Null hypothesis	Test	Sig.	Decision
The distribution of the Average Guest Check Restaurant #3	Independent-samples Mann–Whitney U test	0.001	Reject the null hypothesis

Asymptotic significances are displayed. The significance level is 0.05

Group statistics

	Customer	N	Mean	Std. deviation	Std. error mean
Average Guest Check Restaurant #3	Walk-in Customer	66	$47.4774	$19.08830	$2.34961
	Reservation Customer	61	$63.0436	$24.76669	$3.17105

Independent samples test

Average Guest Check Restaurant #3	Lavene's test for equality of variances		t	t test for equality of means					
	F	Sig.		df	Sig. (2-tailed)	Mean difference	Std. error difference	95 % confidence interval of the difference	
								Lower	Upper
Equal variances assumed	7.702	0.006	−3.984	125	0.000	−$15.5662	$3.90698	−$23.299	−$7.8338
Equal variances not assumed			−3.944	112.630	0.000	−$15.5662	$3.94667	−$23.386	−$7.7469

There was a statistically significant difference in mean average guest check amount between walk-in customers and customers with reservations, $-\$15.57 \pm \$3.95$ [mean ± standard error], $t(-3.944)$ $p = 0.000$

4.4 Restaurant #4

Hypothesis test summary

Null hypothesis	Test	Sig.	Decision
The distribution of the Average Guest Check Restaurant #4	Independent-samples Mann–Whitney U test	0.000	Reject the null hypothesis

Asymptotic significances are displayed. The significance level is 0.05

Group statistics

	Customer	N	Mean	Std. deviation	Std. error mean
Average Guest Check Restaurant #4	Walk-in customer	14	$44.6307	$10.22604	$2.73302
	Reservation customer	52	$51.6608	$15.33185	$2.12614

Independent samples test

Average Guest Check Restaurant #4	Lavene's test for equality of variances		t	t test for equality of means						
	F	Sig.		df	Sig. (2-tailed)	Mean difference	Std. error difference	95 % confidence interval of the difference		
								Lower	Upper
Equal variances assumed	2.137	0.146	−3.782	119	0.000	−$18.6451	$4.93007	−$28.408	−$8.8831
Equal variances not assumed			−4.797	39.970	0.000	−$18.6451	$3.88715	−$26.502	−$10.789

There was a statistically significant difference in mean average guest check amounts between walk-in customers and customers with reservations, −$18.65 ± $3.88 [mean ± standard error], $t(-4.797)$ p = 0.000

4.5 Restaurant #5

Hypothesis test summary

Null hypothesis	Test	Sig.	Decision
The distribution of the Average Guest Check Restaurant #5	Independent-samples Mann–Whitney U test	0.122	Cannot reject null hypothesis

Asymptotic significances are displayed. The significance level is 0.05

Group statistics

	Customer	N	Mean	Std. deviation	Std. error mean
Average Guest Check Restaurant #5	Walk-in customer	14	$44.6307	$10.22604	$2.73302
	Reservation customer	52	$51.6608	$15.33185	$2.12614

Independent samples test

Average Guest Check Restaurant #5	Lavene's test for equality of variances		t	t test for equality of means					
	F	Sig.		df	Sig. (2-tailed)	Mean difference	Std. error difference	95 % confidence interval of the difference	
								Lower	Upper
Equal variances assumed	1.839	0.180	−1.617	64	0.111	−$7.03005	$4.34831	−$15.717	$1.65670
Equal variances not assumed			−2.030	30.636	0.051	−$7.03005	$3.46265	−$14.096	$0.03546

There was homogeneity of variances for the average guest check amounts for walk-in customers and reservation customers, as assessed by Levene's test for equality of variances ($p = 0.051$)

5 Practical implications

As a result of this research, restaurateurs who do not currently take reservations may decide there is value in changing their policy, as they may be missing out on the customers who like to spend in restaurants. I would like to believe that there are restaurant customers out there that do not like to risk their time and effort with restaurants that do not take reservations. Having a 'sure-thing' (reservation) over a gamble (walk-in) must be included as part of the overall customer experience, but then again obtaining something special by waiting two hours for a table in '*the*' hot new restaurant may provide a reward worth the risk (bragging rights). Understanding motive may provide an answer…beginning by first asking why they want to eat in a restaurant in the first place. People either dine away from home because they *have to* or *want to*. On vacation or for work we have no choice, for celebrations, convenience, entertainment we may want to, but it's not that simple. We may look forward to fine dining on holiday or crave a home-cooked meal because we have had enough of the food at the resort and similarly detest the fact you have been forced to dine-out for celebration instead of longing to eat-out. A future qualitative study that interviews the guests of restaurants on their motives to 'walk-in' versus 'call ahead' for reservations would answer the behavioral questions of current consumers in today's restaurant scene. A study that investigates the motives of both walk-in and reservation customers other than physiological need would provide data that restaurant operators could use in marketing to these groups.

As a former restaurant operator, I would view this data valuable in the justification of a reservation system such as OpenTable, as the findings show that the reservation customers are the 'spenders'. In addition as a restaurateur I should always be creating policy and procedures that benefit my customers by making the reservation process simple and seamless. In this era of relationship marketing restaurant operators now have the opportunity to make connections with their customers through the use of reservation systems like OpenTable. In the past, restaurants used to lure customers into tossing their business cards into an empty

fishbowl for a 'draw for a free lunch'. This was the restaurant's way of conducting research and creating a data file at the same time. Now restaurants can take advantage of current reservation systems and conduct direct marketing strategies to who they want, when they want. The available current reservation systems are cloud based, eliminating the need for specialized in-house hardware and software plus trained personnel to make it all work.

6 Limitations and further studies

This study raises additional questions with regard to consumer motivation on restaurant spending. For example, why *do those* who make reservations tend to spend more than those who walk-in? Further studies in restaurant reservations could add to a quantitative inquiry a qualitative approach to question the motives of guest. Understanding the motives though narratives would enable restaurateurs the opportunities to target market guests based on their needs. In addition, restaurant operators could make the decision on which reservation policy works for them in their market based on customer spending motivations. More questions arise that could investigate the differences in restaurant guest spending based on location (urban versus suburban) and other specific demographics such as, age, income, gender and ethnicity. Finally, the question of why guests 'self-select' as to their motivation to reserve or walk-in may be based on the level of importance The limitations on this study was that it was not randomized in the selection of restaurant guests and the study was conducted in a small Canadian city with a population of 125,000.

7 Conclusion

Whatever policy a restaurant employs, it needs to balance the needs of the restaurant which is to maximize revenue and the needs of the customer which is to have an 'enjoyable' experience the restaurant raison d être. A customer is still a customer however they arrive at the door of a restaurant and all need to be treated as equals once they enter to avoid negative bias of any flavor in this day of social media instant communication. As a former restaurant operator, the lesson learned here is, that in the upper to fine dining category of restaurants, not taking reservations and therefor scrambling at the door to maximize seating to maximize revenue, is working hard not smart. A reservation policy that takes advantage of technology to maximize seating is a no-brainer option as the research concludes that the cost is covered in the additional spending of those who book ahead. The moment a restaurant opens the doors and communicates it's policy, whether it is 'first come' or 'book ahead', is a huge part of creating the restaurant brand because then consumers build that first impression of what is to come. For a restaurant to flip flop from a no reservation policy to one that 'now takes reservations' would take time and money marketing the message. This is augmented if the first impression given to potential customers is that the restaurant management and staff extolled an air of arrogance

because they had people lined up out the door when they first opened and felt they could do no wrong because they were the 'hot spot' in town. Eventually all hot spots in a competitive market cool because as flame lights up a new spot, the line-ups diminish, and those unafraid to 'walk-in' move on to the new place. The old establishment eventually drops off the radar by those who like to book ahead. There will always be a place in the foodservice industry for walk-in only restaurants who will take advantage of the market and use their product to drive business, due to uniqueness, and it will succeed. How about a hybrid policy? A restaurant that actively encourages both reservation policies and embraces technology to make it work, determine a portion of the dining room seats dedicated to reservations and the remainder for walk-ins. To make it work it must be communicated to consumers that "yes you can book a table" but we will not fill the restaurant with reservations and we will have tables dedicated for walk-ins. This is not a new concept by any means as restaurants that take reservations always accept walk-ins to make up for any 'no-shows'. What is new is the marketing of both. As the downside of taking reservations is that once people see the common statement in restaurant marketing "reservation recommended" they eliminate the probability of getting a table last minute. Restaurant operators could predetermine the available tables offered based on the anticipated level of business…for example a restaurant would not turn away reservations if they knew at the time requested it was a very slow time for walk-in traffic. Working smart is the key in managing restaurant reservations. Technology can help, but the human factor always needs to be part of the hospitality industry to keep the balance and provide authentic service experiences.

References

Alexandrov A, Lariviere MA (2012) Are reservations recommended? Manuf Service Oper Manag 14(2):218–230

Culinary Institute of America (2014) Remarkable service: a guide to winning and keeping customers for servers, managers, and restaurant owners. Wiley, New York

Hwang J (2008) Restaurant table management to reduce customer waiting times. J Foodservice Bus Res 11(4):334–351. doi:10.1080/15378020802519603

Hwang J, Yoon S (2009) Where would you like to sit? Understanding customers' privacy-seeking tendencies and seating behaviors to create effective restaurant environments. J Foodservice Bus Res 12(3):219–233. doi:10.1080/15378020903158491

Kimes SE (2008) The role of technology in restaurant revenue management. Cornell Hosp Q 49:297

Kimes SE (2011) Customer attitudes towards restaurant reservations policies. J Revenue Pricing Manag 10(3):244–260. doi:10.1057/rpm.2009.24

Prewitt M (2007) No reservations about first-come policies. Nation's Restaurant News 41(49):1–6

Thompson GM, Kwortnik RJ (2008) Pooling restaurant reservations to increase service efficiency. J Service Res 10(4):335–346

Thorn B (2015) Demand for creative cocktails grows. Nation's Restaurant News 49(3):38–40

Weinstein H (2008) Wait management. Nation's Restaurant News 42(4):106